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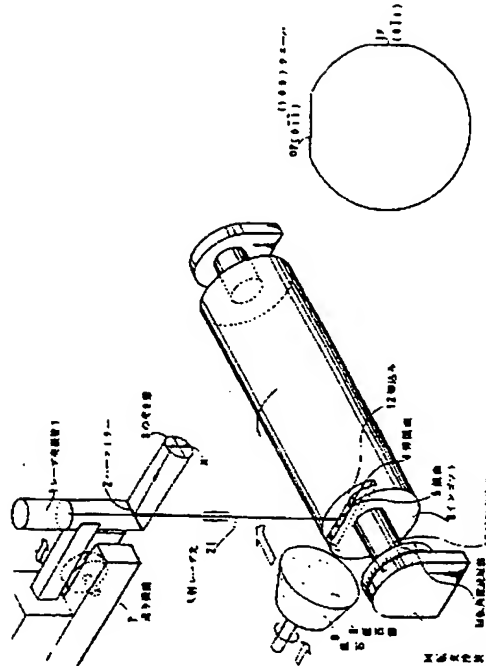
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TITLE : METHOD AND APPARATUS FOR
FORMING ORIENTATION FLAT
SURFACE OF COMPOUND
SEMICONDUCTOR



ABSTRACT : PURPOSE: To enable the direct formation of an orientation flat on a cylindrical ingot without cutting off wafers by a method wherein an appropriate specular surface on a cracking plane formed in a part of the cylindrical ingot is detected by a laser detector provided movably, a laser beam is applied to the face for positioning, and thereafter the orientation flat is formed by grinding.

CONSTITUTION: A cut 12 is formed in the end portion of an ingot in the direction perpendicular to the axis, a thin piece is cleaved off, and a cleavage plane 4 is exposed. The cleavage plane 4 is directed toward a laser oscillator tube 1, and a feeding mechanism 7 is adjusted with a peep through a peeping window 3, so that a laser beam strikes upon a specular surface portion. The ingot is rotated in the state wherein the specular surface 5 is exposed to the laser beam, so that the spot of a reflected beam is coincident with the center M of the peeping window 3. A grinder 8 positioned in parallel with the incident laser beam is pushed against the lateral surface of the ingot and moved along a bus line while rotated, so that a cleavage plane parallel with the surface 9 of the grinder is ground. After one orientation flat OF is formed by grinding in this way, the grinding of another orientation flat IF is conducted.

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